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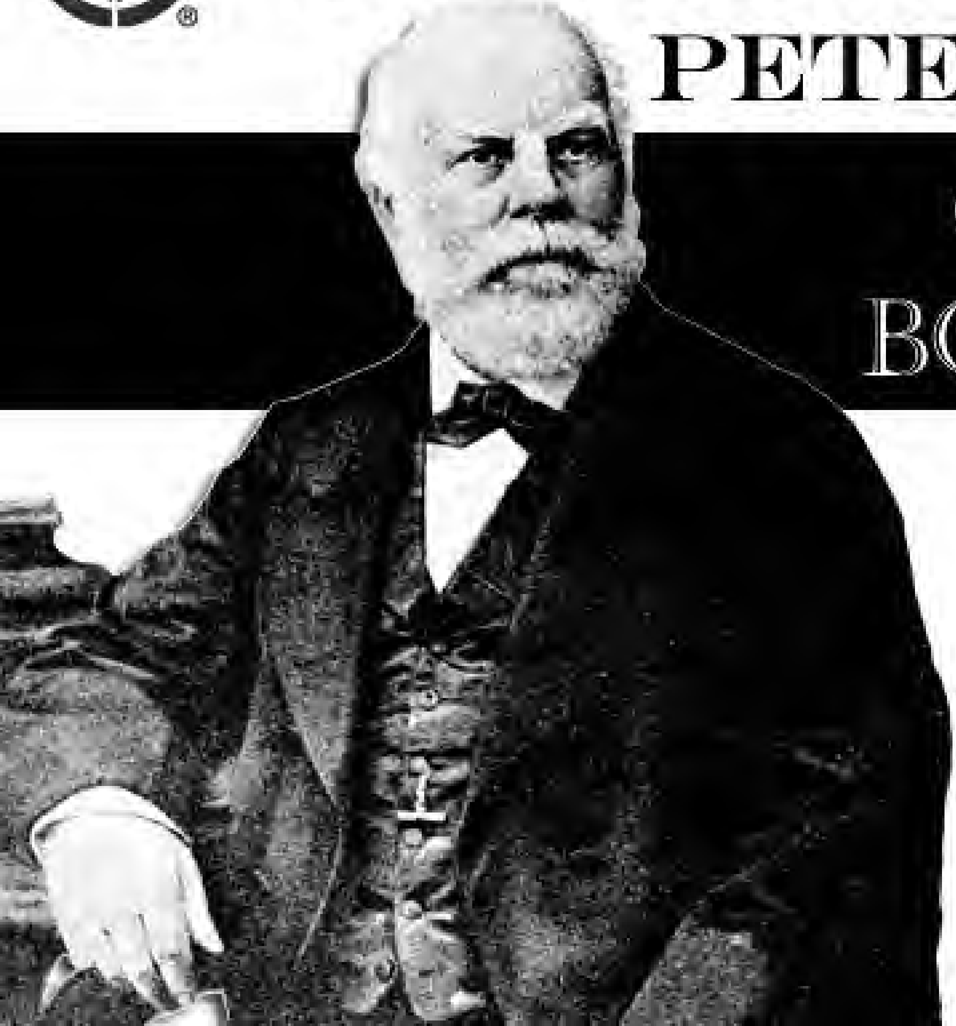
GEORGE ENGELMANN BOTANICAL NOTEBOOKS



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Rec'd June 25th (Package* came Jun 23d
ans same day

Pueblo, June. 20. 873.

Dr. Engelmann

My dear Sir:—

Yesterday I observed a few specimens of Opuntia Missouriensis with such beautiful deep purple flowers, that I thought best to send you,* as I did, this morning, a joint with flower buds by mail. I hope it will not be spoiled by the journey. I found several last years fruits, on the ground, and sent you one of them. This beautiful color of flower I did not meet with in the north of the territory, and it seems quite a curiosity, but it is almost as common here as the yellow or orange. I have given my Cerei, a more careful study, and now suppose that what I thought resembled C. paucispinus, is more likely to be C. triglochidiatus, and the one with many spines (about nine) is not C enneacanthus, but perhaps C.

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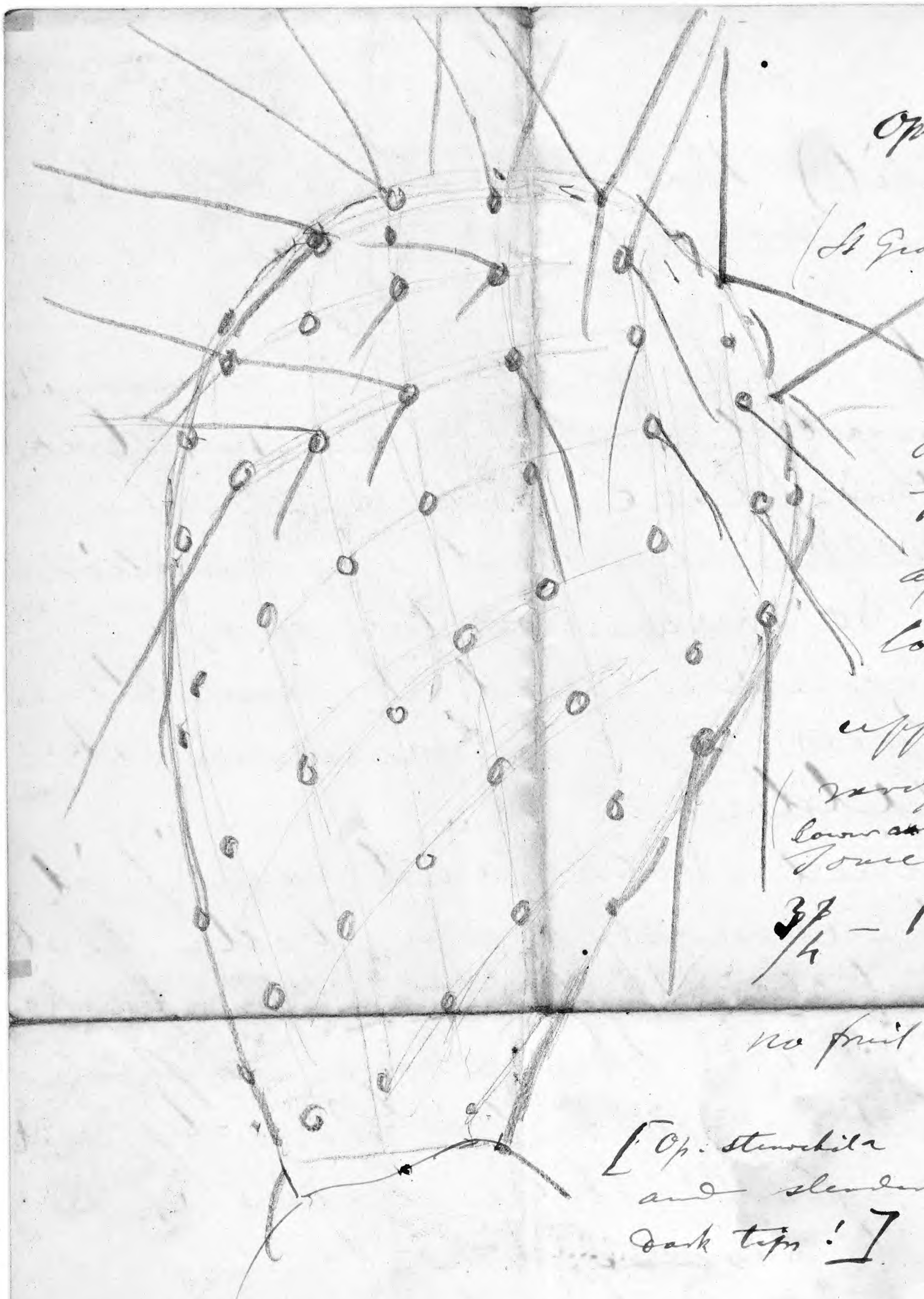
phanicus. All the Cactaceae of this vicinity have flowered now, except the commonest one — Opuntia arborescens.

Very Truly Yours,

E. L. Greene.

2480



?
Opuntia stenochila Eng & Big

(St George, Utah?) Dr Palmer
1870

Joints clavate-obovate thick; areolae rather approximate, oval, with long yellowish bristles, upper ones with 1 or 2 (rarely 3) white deflexed, lower ones somewhat flattened spines 3/4 – 1 3/4 inches long.

no fruit or flowers

[Op. stenochila has more distant areolae and slenderer spines], all whitish, with dark tips!]

Another specimen from St George, also without flowers and fruit has smaller joints, spines also only on upper areolae – white deflexed but shorter, more slender, often 2 or 3 together – old areolae bristled like Rafinesquii

2481

might call it) that operates with its breathing like the sides of a pair of bellows,

I can find no one here to name it and was recomended to you (by Mr. Holke a druggist in this place), as one who could give me the required information viz. What is it? So much for this one, a few more inquiries and I am done. Is the Blue Racer a venomous snake "House Adder"

I have examined both and can find no fangs, but almost every body that I speak to states that they are ~~poi~~ both poisonous, are there any complete works published in regard to the different kinds of Snakes and there habits if so please recomend same to me,

In conclusion I would say, If I can be of any use to you in any way, command me, I am small in the "Natural" World as yet but you know that the Mouse once succeeded in helping the lion (according to the fable)

Yours Very Respectfully

H. P. Child
Box 528 Kansas City

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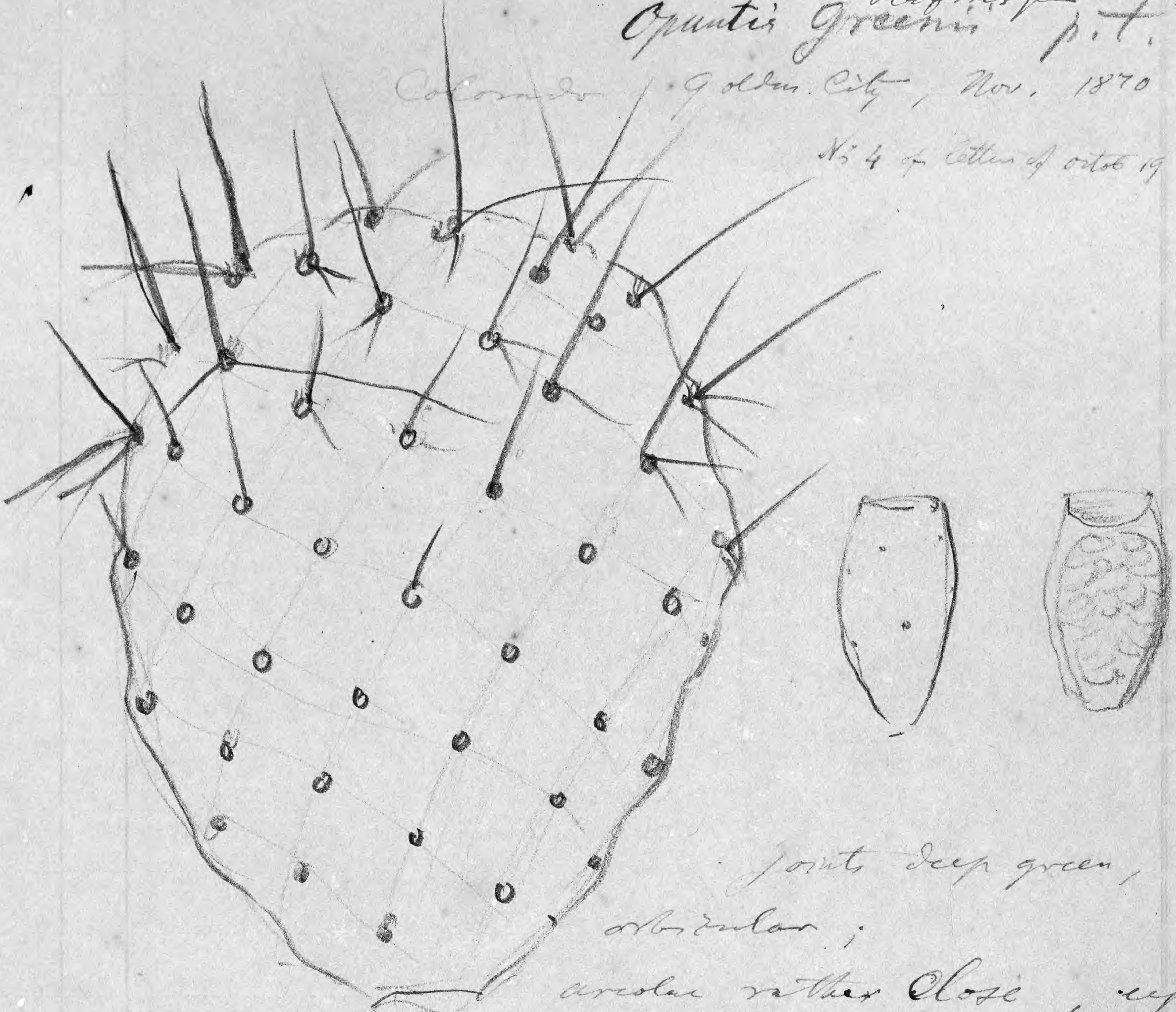
Opuntia Rafinesquii var Greenii p.t.

Colorado / Golden City, Nov. 1870 Ed L Greene

No 4 of letter of octob 19'



joints deep green, obovate-orbicular;

areolae rather close, upper ones armed with 1–3 spines brown red at base, or entirely, especially the straight stout terete upper ones, 1–1½ inches long, lower 1–2 mostly smaller paler, deflexed, bristles in small bunch, red brown, short

without fruit very similar to Greenii, distinguished by the shorter bristles, and in my single specimen by the more numerous spines, but Mr Greene says: fruit thinner, less armed!

Fruit pale reddish-green, only 1 or 1¼ inch long, clavate, with only about 13 very small inconspicuous areolae now naked; pulp viscous, greenish – seeds regular.

Mr Greene thinks it near O. Macrorhiza but he found root fibrous.

2482

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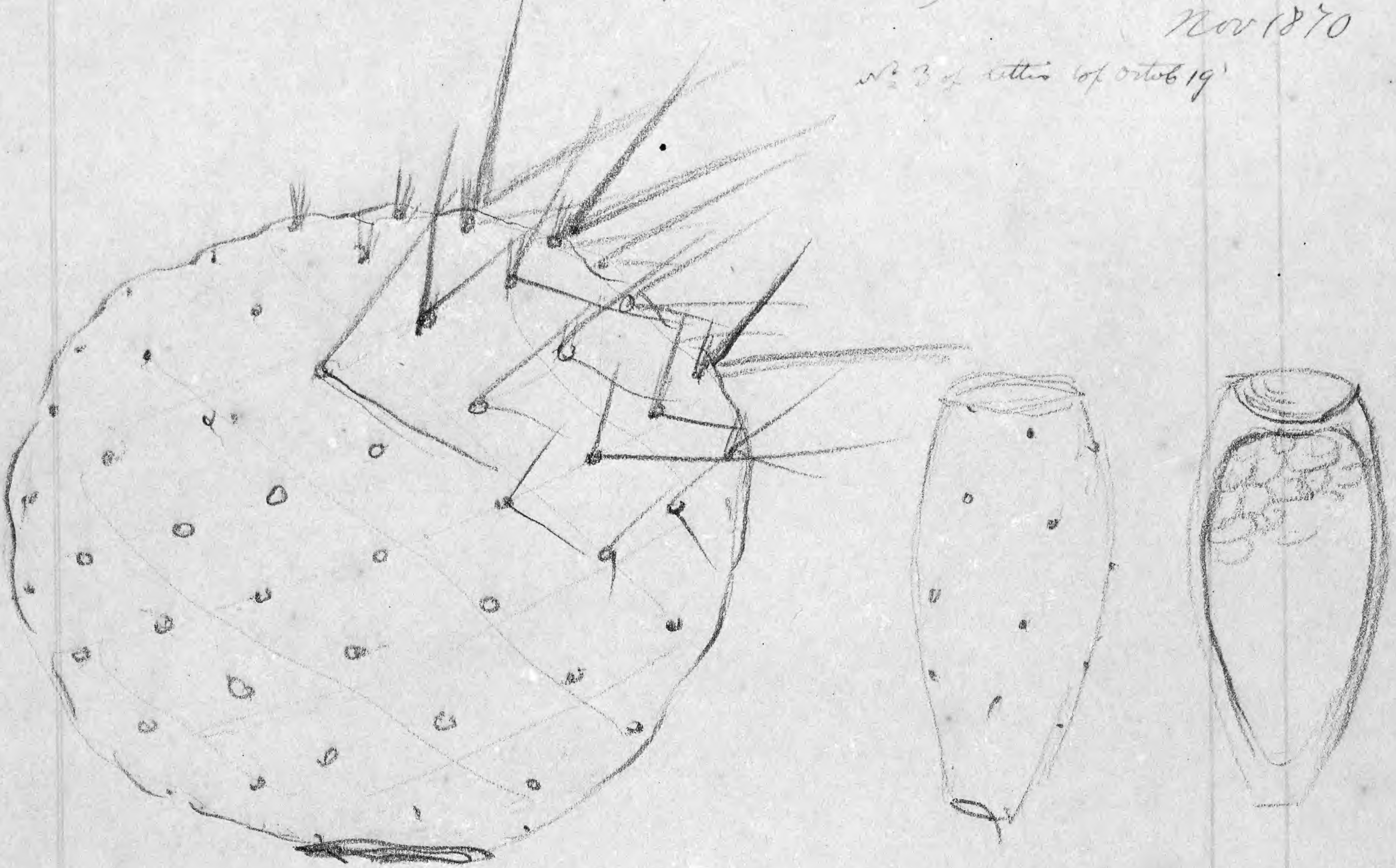
Rafinesquii var

Opuntia oplocarpa pro temp.

Colorado (near Golden City) Ed. L. Greene
Nov 1870

No 3 of letter of Octob 19



joints transverse or orbicular, deep green, like Rafinesq. 3 or 3½ inches in diameter — areolae rather close, over all the upper ones spiny, lower ones unarmed; all with a pencil of long brown bristles at upper end. Spines almost always in twos, rather stout, straight — upper one redbrown, especially towards the base, stouter, erect or porrect, lower one paler, or white, deflexed. usually weaker.

2 inches long
fruit pulpy rather dry, clavate, with hemispherical umbilicus, brown red, like Rafinesquii, with about 20 very small areolae now naked, but
bear 1 or 2 red brown spines, 3-6''' long, one porrected, the other shorter & deflexed and quite deciduous,
said to be spiny like the joint — but spines deciduous. Seed twisted, wavy.

Can it be cymochila?

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2483

Opuntiae in Hort Dyck, Aug. 1857

Opuntiae cruciatae have joints opposite and always in the same plane.

O. Engelmannii and O. Karwinskii are nearly allied by their whitish spines, reddish at base; they seem to be distinct from O. flavispina or fulvispina. fide Salm — to me the differences of colour seem trifling and I think are partly owing to the culture.

O. Engelm. as I know it, the wild plant, looks very much like O. Dillenii in Hort Dyck

my No 89 (1854) is thought by Pr. Salm to agree with my O. chlorotica which can not be. —

O. Dillenii is without the prominent tubercles and becomes very large and high.

O. Tuna on the contrary has very prominent tubercles very stout spines and is rather a low plant, only a few feet high.

O. elongata or perhaps O. coccinellifera is my Nopal Castillano from Santa Rosa.

Op. prostrata is very much like my O. Rafinesq. and may finally proove identical with it – It is the plant Bruce S. sent me many years ago.

O. intermedia seems different and may be more probably and properly a form of O. vulgaris I do not have it in Cultivation.

O. setispina belongs to the section of Missouriensis as it seems, and may not be distinct from O. M. albispina ?? – it is a stout and long-spined form, large, erect (at least here in Cultivation) and has the lower smaller spines reflexed like the common O. Missouriensis.

The plant named here O. Lindheimeri is not what I took it to be; it is rather a brown bristled large form of O. Rafinesq. which Lindheimers seeds may have produced – but it is said to be the product of my seeds No 79

I find no large root on my undoubted specimen of O. Macrorhiza which fact does away with one of the difficulties, which prevented me partly from uniting it with Rafinesquii. It seems that in Europe the large root is nothing necessary or permanent.

Op. Kleiniae and
Op. Microdasys have been sent from Africa where they are perfectly naturalized.

~~1265~~ 582
~~1280~~ 640

Opuntia sphaerocarpa Eng & Big. var? Utahensis Eng. Prostrate, small joints orbicular – obovate, tumid; minute leaves subulate, in their axils with few (~~mostly~~ weak and single) spines or none and a few and very short bristles; flowers large, pale yellow; fruit oval and almost spineless (at least dry?)

On the Pass west of Steptoe Valley, Utah. H. Engelmann. Joints 2–3 inches long and almost as wide – often quite thick; flowers 3 inches in diam.

O. Missouriensis DC. prostrate, joints middle-sized, obovate or almost orbicular ~~covered with~~ tuberculate, leaves minute subulate, ~~with~~ all bearing in the axils 5–10 radiating or deflexed spines (1–2' long) +/ flowers large yellow, with green erect stigmas; fruit dry and spiny.

Salt Lake desert and throughout the basin, ~~H. Engelmann~~, in different varieties, with stouter ~~or~~ more slender reddish or whitish spines. fruit 2–3 inches in dia. flowers 3 diameter.

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A

Opuntia chlorotica E. & B.?

Cact. Whipp. p. 38

Opuntia sp; near strigil Engl. or Engelmanni Salm.

On open broken hills, generally in the crevices of the rocks, or leaning against their sides. Two—four feet high; arborescent, spreading however chiefly in one plane. Joints large, fleshy; clear light green; oval, subcircular or pyriform; usually growing with their planes mutually parallel: but ~~too~~ may be inserted at any angle; often a right one. — The main stem in adult plants loses its flattened discoid shape, and becomes nearly cylindrical: much more hard & ligneous: brown rather than green; and very thickly set with longer and stouter spines; with ~~but~~ fewer of the spinoles. The larger spines adherent: the smaller. — those that grow in clusters around the margin and on the planes, in the axiles of the spines proper) very easily detachible; and being barbed quickly insinuate themselves through the thickest clothes, and enter the skin, whence they are with difficulty removed. They are intensely irritating: the head of one remaining in the skin soon provokes a little areola of inflammation. Fruit 1–2 inches long, obovate, almost pyriform, deeply umbilicated, smooth, glaucous, or "furry" with sparsely scattered papillae. green, or ~~scarlet~~ crimson red, or of both these colors blended, according to degree of maturity. Flowers?

Another specimen (different species? variety? or accidental?) taken from a small plant. Joints very large, heavy, fleshy = shaped (much less rounded or oval than the others: spines longer, but fewer in a bunch, and much more sparsely scattered; spinoles fewer, shorter: Found in same locality.

2486

A

Field-notes "A"
on two? species of
Opuntia

Nov. 26 1864. Elliott Coues

Dr. E. COUES U.S.A.
JAN 23 1880
Washington D.C.

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"B."

Platopuntia ——— ? phaeacantha major

(near O. procumbens E&B ?? but that has lighter col^{d} spines

Growing in the same localities with species A; but very different from it, as follows:–

Not erect, but *procumbent* or subrepent: spreading in patches along the bases of rocks, or in their crevices, or on their flat surfaces. Patches six or eight feet in diameter, only a foot or so high.

Joints very *large* & fleshy, but *thin* & quite smooth & plane: averaging *8* inches in length by about *5* in width, and *1/3* in thickness: oval or pyriform in shape; clear deep green color. The planes of contiguous joints usually parallel. The pulvilli *sparsely distributed*, *all spiniferous*, except a few of the nethermost ones. The bristles of the lateral pulvilli very short, few, & inconspicuous; forming a small conical bundle; of the marginal pulvilli much larger, longer; and standing more apart from each other: all dull dirty yellow in color. Spines *usually 4, sometimes three*, more rarely only two to a pulvillus; as usual, one or two much shorter than the others; the marginal ones much longer and stouter than the lateral; and these decreasing in size from top to base of the joint; disappearing entirely before the base is quite reached. All stand directly away from each other and from the plant, with no deflection in any special direction. The spines are nearly or quite *cylindrical* & very acutely pointed, slender in their whole continuity: *bright reddish*

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2487

"B."

Fieldnotes on

Platopuntia — ?

Elliott Coues

Dec. 3. 1864.

Dr. E. Coues U.S.A. Washington D.C. JAN 28 1886

brown to near their tips where they fade into white; But sometimes, especially on the smaller and more basal spines, they are white for nearly or quite their whole length.

Fruit (examined in December), dull reddish purple, and much shrivelled, contracted with longitudinal grooves & ridges. Small; nearly cylindrical or very narrowly pyriform; averaging 1 1/4 inches in length; the apex very deeply umbilicated. Fruit usually (always?) borne erect on the margins of the joints.

Flowers?

The difference in the general habit of the plant; in the shape of the joints; in the size, color & distribution of the spines, etc, between this species and Sp. A (strigil?), at once catches the eye. The two species are found growing together among the rocks, on steep, broken barren hillsides.—

"C."

Platopuntia —— 2.

In the grass, in alluvial mountain valleys & fertile plains, about Fort Whipple. A small insignificant plant; sub erect, or more or less procumbent. Generally grows singly: have never seen it in patches of any extent. The whole plant usually only a foot or two in diameter; and sixteen inches high.—

December specimens. The plant much shrivelled & shrunken, the surfaces of the joints drawn into irregular ridges and grooves. Joints usually almost quite circular, sometimes obovate; always thin, 2½–3½ inches in diameter; pale dirty green, passing into dull greenish or reddish purple. Pulvilli very few & sparsely distributed; only the upper & marginal ones bearing spines.— The bristles on the pulvilli about 1/10 inch long, forming a closely aggregated bundle, sharply conical, dirty yellow. Spines long, averaging 1½ inches, varying from one inch to more than two; exceedingly slender, more or less flattened & compressed; the compression twisting spirally round the spine from base to tip: Spines generally two, sometimes three, more rarely only one to a pulvillus, one ~~always~~ usually longer than the others; standing out directly from the plant without any notable deflection in any direction; Pure white in their whole length, or dull reddish brown at their bases: growing only on the upper & marginal pulvilli.

Flower?

Fruit?

2489

"C."

Field notes on

Platopuntia —— 2.

Elliott Coues

Dec. 4 1864

Dr. E. COUES U.S.A. Washington D.C.
JAN 25 1886

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"F." — Species identical with "C" ?

Growing abundantly in same situations as noted under description "C", with same habit. May 1st

May Specimens. - Clear dark green, with a glaucous hue. Surface smooth. Round, or very broadly pyriform in shape, thick and fleshy. Pulvilli sparse, particularly towards the bases of the disks; and only the upper & terminal pulvilli bearing spines. Spines long, very slender, not reversed, but standing away from the plant in every direction, - 1 to three on a pulvillus; either entirely pure white, or with a light reddish tinge basally. usually more or less distinctly grooved or flattened in a spiral direction. - Lie

The superior marginal pulvilli at this date, - (May 1st) putting forth buds.

By far the most abundant & characteristic species about Fort Whipple, growing everywhere in the grass of the valleys & plains. A small plain species.

Many plants are to be found, even at this season, more or less shrivelled & wrinkled, and in all the shades of color from green to yellow, & yellow to scarlet.

2490

"4."

Field notes on

Platopuntia — ?

Elliott Coues

May 1st. 1865

Dr. E. COUES U.S.A. Washington D.C.
JAN 22 1866

"I" & "J."

Platopuntia.

Two specimens, budding, of Prickly Pear, much resembling each other, and also species "C"; all specifically identical?

From Skull Valley, May 3rd 1865 Br

2491

"I. & J."
Platopuntia. — 2
May 3rd, 1865
Elliott Coues

Dr. E. COUES U.S.A. Washington D.C.
JAN 28 1886